

Unit-1

Pulse digital modulation:

- 1) Elements of dc system
- 2) Advantages of dc system.
- 3) Sampling & Quantization & Coding
- 4) Quantization error
- 5) DPCM
- 6) Delta modulation
- 7) Adaptive delta modulation.
- 8) noise in PCM and DM systems

Unit-2:-

Data Transmission:-

- 1) ASK
- 2) FSK
- 3) PSK
- 4) DPSK
- 5) DEPSK
- 6) QPSK
- 7) PSK
- 8) ASK
- 9) FSK
- 10) Error Probability
 - 1) ASK
 - 2) DPSK
 - 3) BFSK
 - 4) QPSK

Unit-3

Data transmission:-

Base band signal receiver, Probability of error, the optimum filter, matched filter, detection of FSK, calculation error probability of ASK, BPSK, QPSK, OQPSK.

Unit-4:-

Information theory:-

- 1) Amount of Information & Properties.
- 2) Average Information
- 3) Entropy & its Properties
- 4) Information rate
- 5) Mutual information & its Properties.

Unit-5

Source coding:-

- 1) Shannon's theorem
 - 2) Shannon-Fano coding
 - 3) Huffman coding
 - 4) Channel capacity
 - 5) Gaussian channel
- Bandwidth - SN trade off

Unit-6:-

- 1) Linear block codes
- 2) Hamming codes
- 3) Binary cyclic code
- 4) Encoding of Convolution codes.
- 5) State, tree and trellis diagram decoding using Viterbi algorithm.